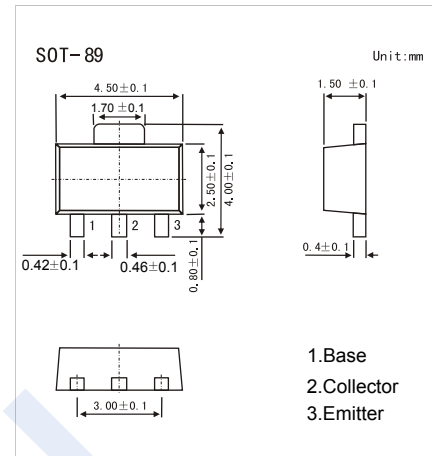


NPN Transistors

2SD1618

■ Features

- Low collector-to-emitter saturation voltage.
- Very small size making it easy to provide highdensity, small-sized hybrid IC's.
- Complementary to 2SB1118

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	20	V
Collector - Emitter Voltage	V_{CE0}	15	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	0.7	A
Collector Current - Pulse	I_{CP}	1.5	
Collector Power Dissipation (Note.1)	P_C	0.5	W
		1.3	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: Mounted on ceramic board ($250\text{mm}^2 \times 0.8\text{mm}$)

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100\text{ }\mu\text{A}$, $I_E = 0$	20			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1\text{ mA}$, $R_{BE} = \infty$	15			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\text{ }\mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 15\text{ V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{ V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5\text{ mA}$, $I_B = 0.5\text{ mA}$		10	25	mV
		$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$		30	80	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$		0.8	1.2	V
DC current gain	h_{FE}	$V_{CE} = 2\text{ V}$, $I_C = 50\text{ mA}$	140		560	
		$V_{CE} = 2\text{ V}$, $I_C = 500\text{ mA}$	60			
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$		8		pF
Transition frequency	f_T	$V_{CE} = 10\text{ V}$, $I_C = 50\text{ mA}$		250		MHz

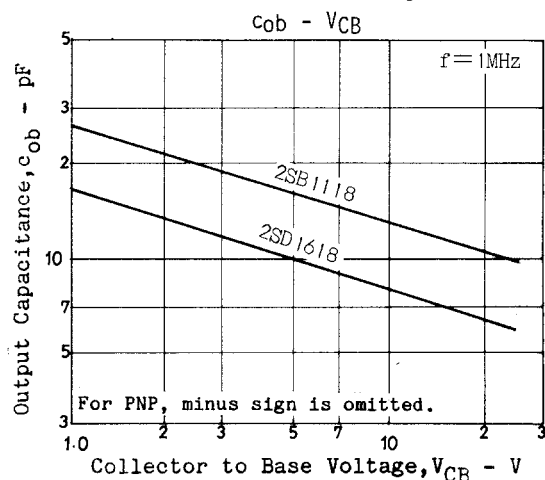
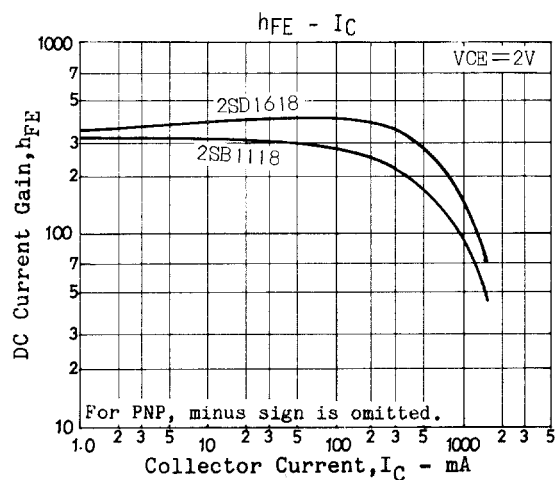
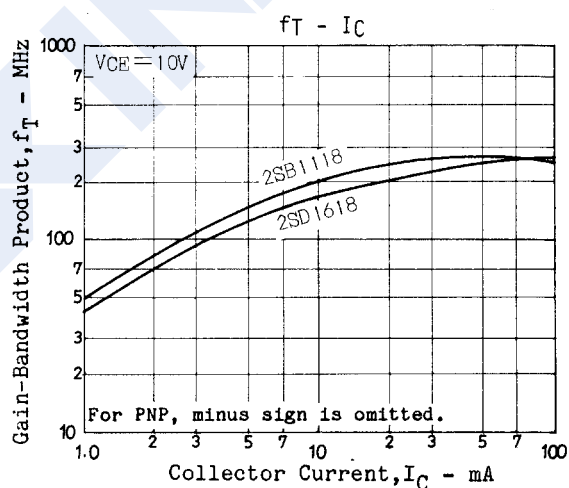
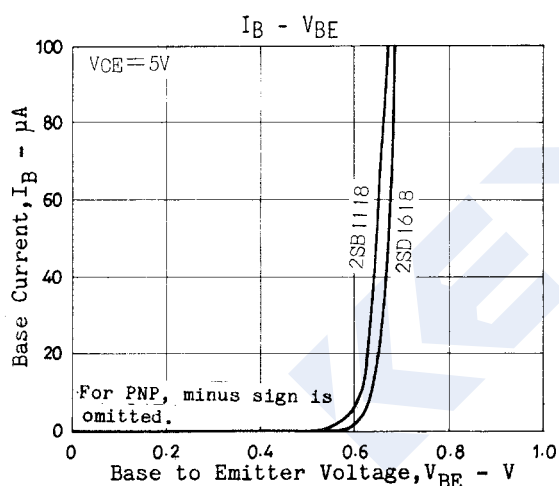
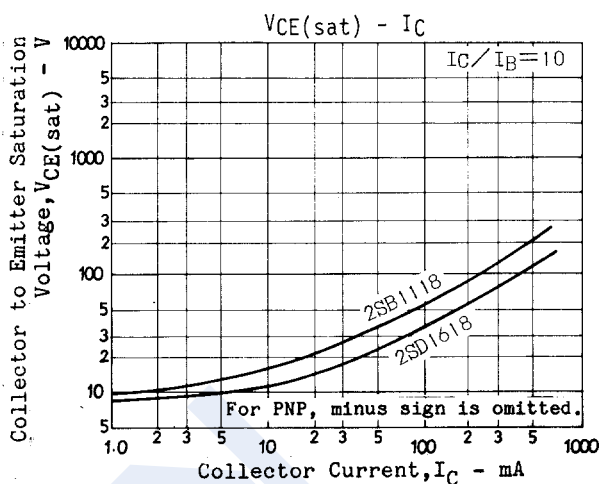
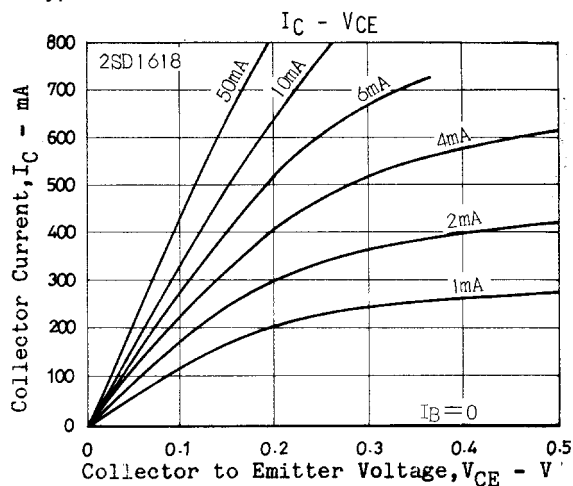
■ Classification of $h_{FE}(1)$

Type	2SD1618-S	2SD1618-T	2SD1618-U
Range	140-280	200-400	280-560
Marking	DA S*	DA T*	DA U*

NPN Transistors

2SD1618

■ Typical Characteristics



NPN Transistors

2SD1618

■ Typical Characteristics

